



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)

BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208

Miami, Florida 33175-2474

T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/pera/

American Warming and Ventilating

7301 International Drive

Holland, OH 43528

SCOPE: This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model LE-68 6" Aluminum Louver

APPROVAL DOCUMENT: Drawing No. 1503, titled "LE-68 Vertical Louver System", sheets 1 through 9 of 9, dated 10/18/2006, with last revision B1 dated 11/17/2011, prepared by W. W. Schaefer Engineering and consulting, P.A., signed and sealed, by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control renewal stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, Bradner, OH, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **renews** NOA # 08-0904.02 and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



Handwritten signature and date:
06/06/2012

NOA No. 12-0312.02

Expiration Date: March 15, 2017

Approval Date: June 14, 2012

Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **1503**, titled "LE-68 Vertical Louver System", sheets 1 through 9 of 9, dated 10/18/2006, with last revision B1 dated 11/17/2011, prepared by W. W. Schaefer Engineering and consulting, P.A., signed and sealed, by Warren W. Schaefer, P.E.

B. TESTS *"Submitted under NOA # 08-0904.02"*

1. Test report on Large Missile Test (Level E) and on Cyclic Load Test per ASTM 1886/1996 of an LE-68 Aluminum Louver System, prepared by Hurricane Test Laboratories LLC., Report # **0198-0109-07**, dated 03/08/2007, signed and sealed by Vinu J. Abraham, P.E.
2. Test report on Wind Driven Rain Test per TAS 100(A) of an LE-68 Aluminum Louver with AFD-20 Damper, prepared by PRI Construction Materials Technologies, LLC, Report No. **AWV-001-02-01**, dated 01/02/2008, Duc T. Nguyen, P.E.
3. Test report on Wind Driven Rain Test per TAS 100(A) of an LE-68 Aluminum Louver with AC-525, prepared by PRI Construction Materials Technologies, LLC, Report No. **AWV -002-02-01**, dated 01/02/2008, Duc T. Nguyen, P.E.

"Submitted under NOA # 06-1211.04"

4. Test report on Large Missile Impact Test per FBC, TAS 201, Cyclic Wind Pressure Test per FBC, TAS 203 and Uniform Static Air Pressure Test per FBC, TAS 202 of a LE-68 Aluminum Louver System, prepared by Hurricane Test Laboratories, LLC, Report No. **0198-0712-06**, dated 11/07/2006, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS

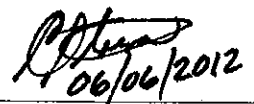
1. Anchor calculations prepared by W.W. Schaefer Engineering and Consulting P.A., dated 11/07/2011, signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 08-0904.02"

2. Anchorage, stress and deflection calculations of the Louver System with AFD-20 Dampers, sheets 1 through 4 of 4 and with AC-525/526 Dampers, sheets 1 and 2 of 2, both dated 07/22/2008, prepared by W.W. Schaefer Engineering and Consulting P.A., signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 06-1211.04"

3. Anchorage calculations, 13 pages for Arrow United Industries, **Model LE-68** Vertical Louver, prepared by W.W. Schaefer Engineering and Consulting P.A., signed and sealed on 11/07/2006 by Warren W. Schaefer, P.E.


06/06/2012

Carlos M. Utrera, P.E.

Product Control Examiner

NOA No. 12-0312.02

Expiration Date: March 15, 2017

Approval Date: June 14, 2012

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

1. Miami-Dade Department of Permitting, Environment, and Regulatory Affairs (PERA)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to 2007 and 2010 FBC issued by W.W. Schaefer Engineering and Consulting P.A., dated 11/07/2011, signed and sealed by Warren W. Schaefer, P.E.
2. No financial interest letter issued by W.W. Schaefer Engineering and Consulting P.A., dated 11/01/2011, signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 08-0904.02"
3. Statement letter of code conformance issued by W.W. Schaefer Engineering and Consulting P.A., dated 07/23/2008, signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 06-1211.04"
4. Letter dated 11/06/2006 from W.W. Schaefer Engineering and Consulting P.A., stating that the product EAV-66 Vertical Louver System conforms to the 2004 Florida Building Code, signed and sealed by Warren W. Schaefer, P.E.
5. No financial interest letter from W.W. Schaefer Engineering and Consulting P.A., dated 11/07/2006, signed and sealed by Warren W. Schaefer, P.E.


06/06/2012

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 12-0312.02

Expiration Date: March 15, 2017
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GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE LOUVERS.
- THESE LOUVER SYSTEMS HAVE BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) AND PROTOCOLS TAS-100, 201, 202 & 203 INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
- EACH LOUVER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS: AMERICAN WARMING AND VENTILATING HOLLAND, OH
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
- ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
- ALL WOOD SUBSTRATE SHALL BE MIN. G = 0.55 DENSITY.
- ALL METAL STUD SUBSTRATE SHALL BE MIN. 16 GA. Fy = 33 ksi.
- ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 12 GA. Fy = 36 ksi.
- INDIVIDUAL PANEL WIDTHS ARE UNLIMITED IN DIMENSION. PANEL HEIGHTS ARE LIMITED BY THE DIMENSIONS SHOWN IN THE ELEVATIONS.
- INDIVIDUAL PANELS MAY BE STACKED HORIZONTALLY IN AN UNLIMITED QUANTITY. IT IS THE RESPONSIBILITY OF THE SUPPORTING STRUCTURES DESIGN ENGINEER/ARCHITECT TO INSURE THE SUPPORTING STRUCTURE WILL SUPPORT ALL DESIGN LOADS TRANSFERRED BY THE LOUVERS.
- MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
- THESE LOUVERS HAVE PASSED TESTING IN ACCORDANCE WITH ASTM E1886 & E1996 FOR ESSENTIAL FACILITIES LEVEL "E" 80 FT/S LARGE MISSILE IMPACT SPEED. THEREFORE, THESE LOUVER SYSTEMS ARE APPROVED FOR USE WITH ESSENTIAL FACILITIES.
- THIS SYSTEM HAS BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS A WATER RESISTANT SYSTEM WHEN AN AFD-20 OR AC525/526 DAMPER IS INSTALLED WITH THE LOUVER PANEL.
- UNLESS THE AFD-20 OR AC525/526 DAMPER IS ATTACHED TO THE LOUVER, THE LOUVER IS TO BE INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVER IS DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM, AND THE ROOM WILL HOUSE WATER RESISTANT/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.

CORNER & BLADE END CONSTRUCTION

BLADE TO HEAD & SILL:

BLADE END IS SQUARE CUT, BUTTED AND JOINED TO HEAD AND SILL WITH TWO NO. 8 X 1" S.S. SMS SCREWS PER BLADE END.

HEAD & SILL TO JAMB:

SIDE JAMB IS SQUARE CUT, BUTTED AND JOINED TO HEAD AND SILL WITH TWO 1/4" X 1" SELF TAPPING SCREWS.

FASTENER SCHEDULE

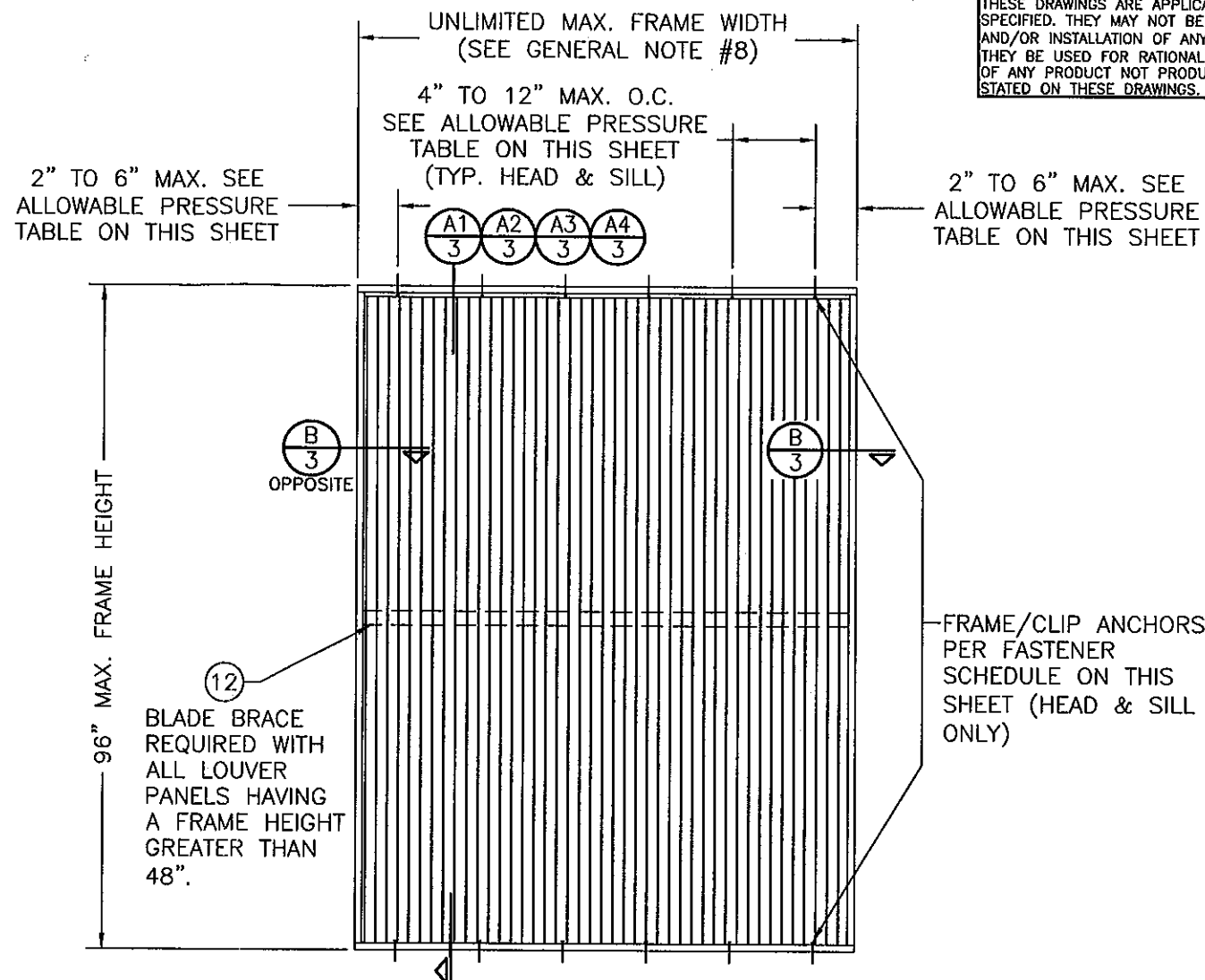
ANCHOR TYPE	(4) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(3) NO. 10 S.S. SCREW	WOOD	1 1/4"	3/4"
(5) NO. 10-16 SELF TAPPING/DRILLING SCREW	METAL STUD	FULL	3/4"
(1) 1/4" CONCRETE SCREW	CONCRETE	1 1/2"	2"
(2) 1/4" BOLT	STEEL OR METAL STUD	FULL	3/4"
(5) 1/4-20 OR 1/4-14 SELF TAPPING/DRILLING SCREW	STEEL	FULL	3/4"

- CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, ITW RAMSET/RED HEAD TAPCONS OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.).
- BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. (Fv = 10,000 PSI MIN.)
- SMS WOOD SCREWS SHALL HAVE MIN. YIELD STRENGTH OF Fyb = 80,000 PSI
- SEE GENERAL NOTES FOR SUBSTRATE REQUIREMENTS.
- SELF TAPPING SCREWS SHALL BE CORROSION RESISTANT MIN. SAE GRADE 2 STEEL OR MIN. ALLOY GROUP 1, 2 & 3 CONDITION "A" STAINLESS STEEL.

(2) ALLOWABLE DESIGN PRESSURE & ANCHOR SPACING REQUIREMENTS (LOUVER PANELS)

(1) MAX. ANCHOR SPACING	(1) MAX. ANCHOR END DISTANCE	ALLOWABLE PRESSURE
4"	2"	+/-150 PSF
8"	4"	+/-75 PSF
12"	6"	+/-50 PSF

- WHEN LOUVERS ARE USED TO PROTECT ESSENTIAL FACILITIES, MAX. ANCHOR SPACING SHALL NOT EXCEED 4" & MAX. ANCHOR END DISTANCE SHALL NOT EXCEED 2" REGARDLESS OF PRESSURE REQUIRED.
- FOR ALLOWABLE PRESSURE ON DAMPERS, SEE SHEET 5 OR 7.



EXTERIOR ELEVATION SINGLE LOUVER PANEL (ARCHITECTURAL & NON-ARCHITECTURAL)

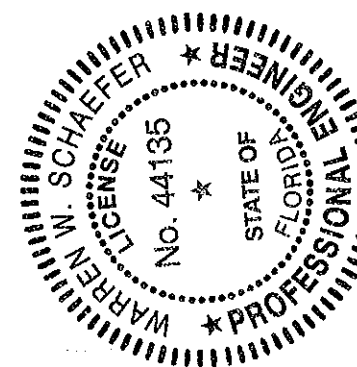
SCALE: 1/2" = 1'-0"

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

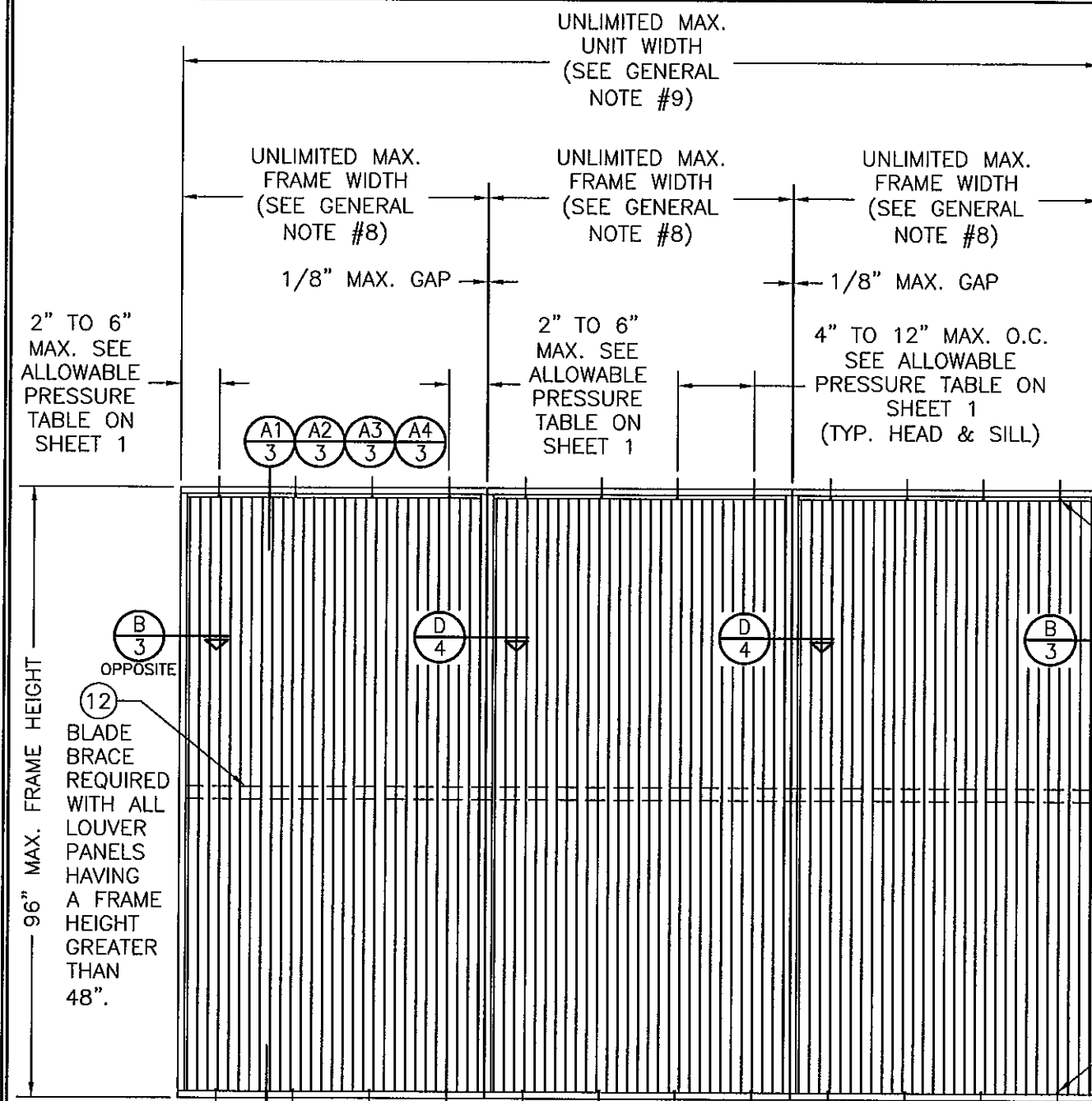
DRAWN BY:		CHECKED BY:	
W.R.M.		W.W.S.	
PLOT:		DATE:	
1-24		10/18/06	
NO.	REVISION DESCRIPTION	DATE	BY
A1	UPDATE TO PRESENT STANDARDS	07/14/08	W.W.S.
A2	ADDED DAMPER CONDITIONS	07/14/08	W.W.S.
A3	ADDED ESSENTIAL FACILITIES USE	07/14/08	W.W.S.
B1	UPDATE TO PRESENT STANDARDS	11/17/13	W.R.M.

DRAWING TITLE	
LE-68 VERTICAL LOUVER SYSTEM	
MANUFACTURER	
AMERICAN WARMING & VENTILATING	
7301 INTERNATIONAL DRIVE	
HOLLAND, OHIO 43528	
419-865-5000	
CONSULTANTS	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	
7480 150TH COURT NORTH	
PALM BEACH GARDENS, FL 33418	
PHONE: 561-744-3424	

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 12-0312-02
Expiration Date 03/15/2017
By *[Signature]*
Miami Dade Product Control

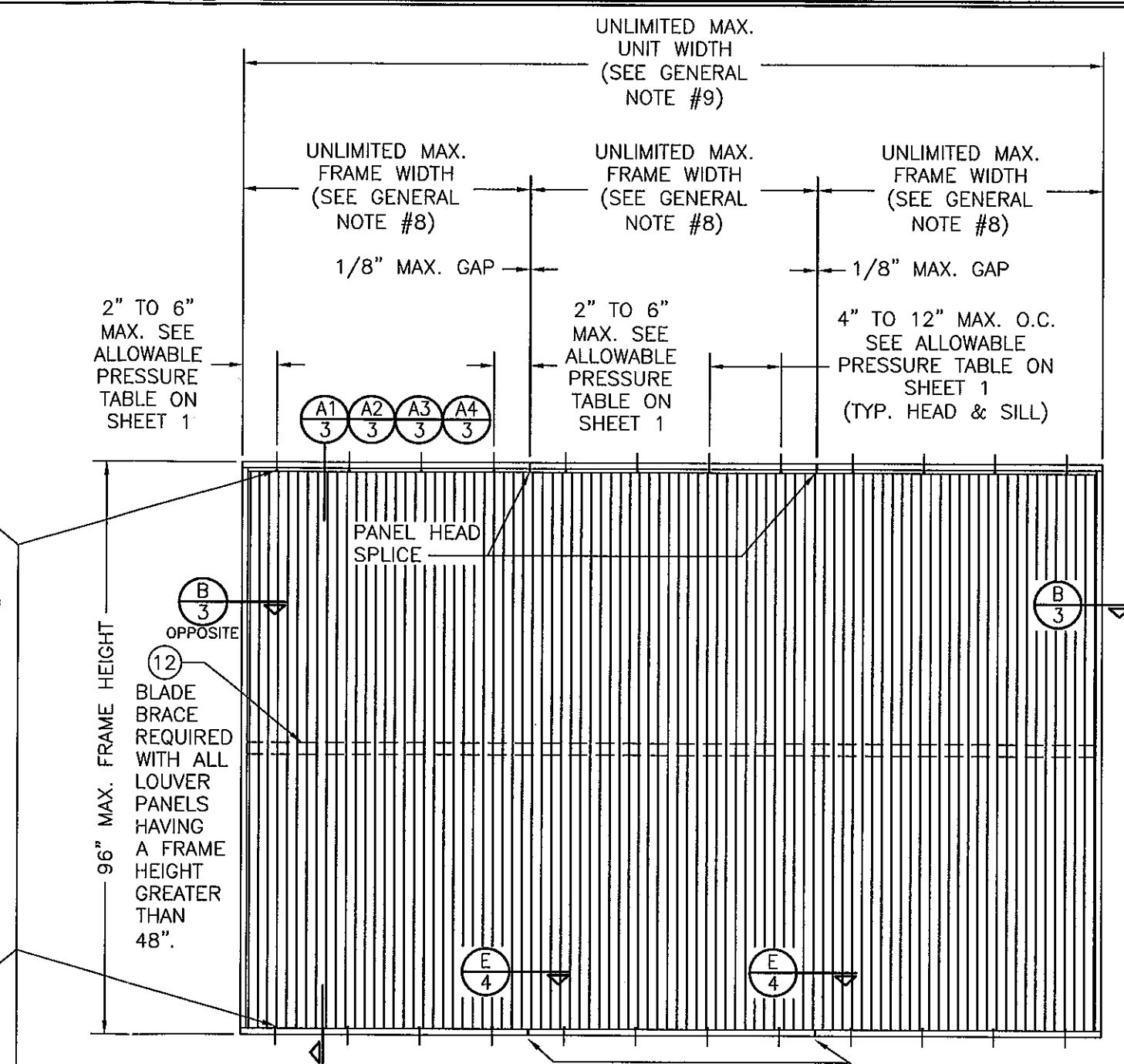


CERTIFICATION	
NOV 07 2011	
WARREN W. SCHAEFER, P.E.	
P.E. NO. 44135	
DRAWING NO.	REV.
1503	B
SHEET NO.	
1 OF 9	



EXTERIOR ELEVATION
MULTIPLE LOUVER PANELS
(NON-ARCHITECTURAL)

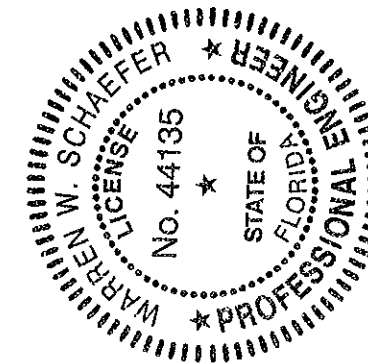
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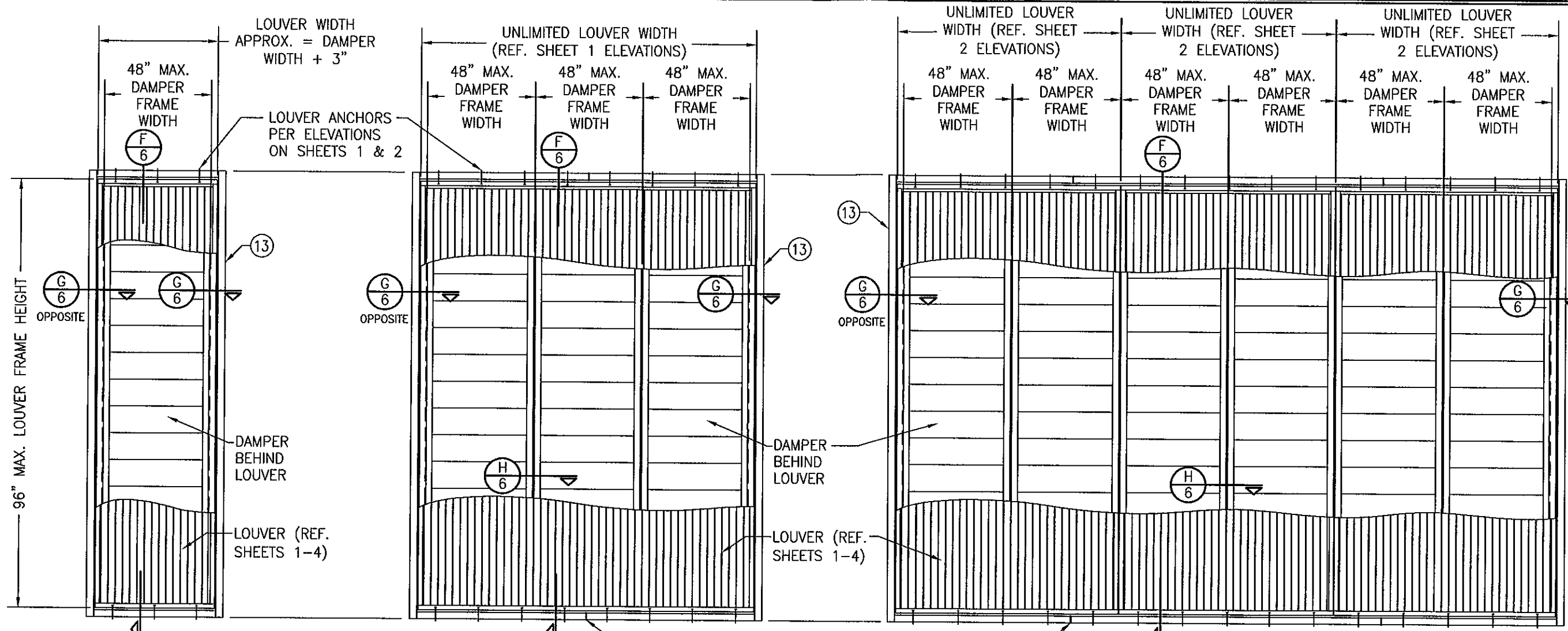
EXTERIOR ELEVATION
MULTIPLE LOUVER PANELS
(ARCHITECTURAL)

SCALE: 1/2" = 1'-0"

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 12-0312.02
Expiration Date 12/15/2017
By *[Signature]*
Miami Trade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 10/18/08	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE LE-68 VERTICAL LOUVER SYSTEM			
MANUFACTURER AMERICAN WARMING & VENTILATING 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION NOV 07 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1503		REV. B	
SHEET NO. 2 OF 9			



**EXTERIOR ELEVATION:
SINGLE LOUVER PANEL WITH A
SINGLE AFD-20 DAMPER**
SCALE: 1/2" = 1'-0"

**EXTERIOR ELEVATION:
SINGLE LOUVER PANEL WITH
MULTIPLE AFD-20 DAMPERS**
SCALE: 1/2" = 1'-0"
1) NUMBER OF DAMPERS BEHIND A LOUVER
PANEL IS UNLIMITED.
2) EACH INDIVIDUAL DAMPER PANEL IS LIMITED
TO A 48" FRAME WIDTH.

SUPPORT SLEEVE SPLICE MAY
OCCUR MID-WAY BETWEEN
ANCHORS AT ANY LOCATION
PROVIDING NO SLEEVE SECTION
LENGTH IS LESS THAN THE
DAMPER PANEL FRAME WIDTHS.
SPlicing OF SLEEVES SHALL BE
DONE IN A MANNER THAT DOES
NOT ALLOW WATER LEAKAGE
THROUGH THE SPLICE.

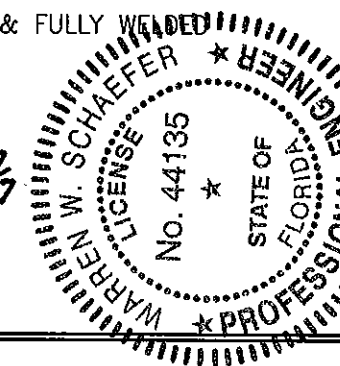
**EXTERIOR ELEVATION:
MULTIPLE LOUVER PANELS WITH
MULTIPLE AFD-20 DAMPERS**
SCALE: 1/2" = 1'-0"
1) NON-ARCHITECTURAL LOUVERS SHOWN. ARCHITECTURAL LOUVERS ALSO APPLY.
2) MORE THAN 1 DAMPER MAY BE PLACED BEHIND EACH LOUVER PANEL.
3) DAMPER MULLIONS/SEAMS DO NOT HAVE TO ALIGN WITH LOUVER PANEL SEAMS.
4) EACH INDIVIDUAL DAMPER PANEL IS LIMITED TO A 48" FRAME WIDTH.

ALLOWABLE DESIGN PRESSURE (AFD-20 DAMPERS)					
MAX. DAMPER FRAME HEIGHT (IN.)	MAX. DAMPER FRAME WIDTH (1) (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MAX. DAMPER FRAME HEIGHT (IN.)	MAX. DAMPER FRAME WIDTH (1) (IN.)	ALLOWABLE PRESSURE (+/- PSF)
90.5	48	90.1	72.5	48	122.3
	42	103.0		42	139.8
	36	120.1		38	150.0
	30	144.2	66.5	48	133.4
	28	150.0		42	150.0
84.5	48	104.2	60.5	48	146.6
	42	119.0		42	150.0
	36	138.9		46	150.0
	33	150.0	(1) DAMPER FRAME HEIGHT IS APPROXIMATELY 5.5" LESS THAN THE LOUVER FRAME HEIGHT.		
78.5	48	113.0			
	42	129.1			
	36	150.0			

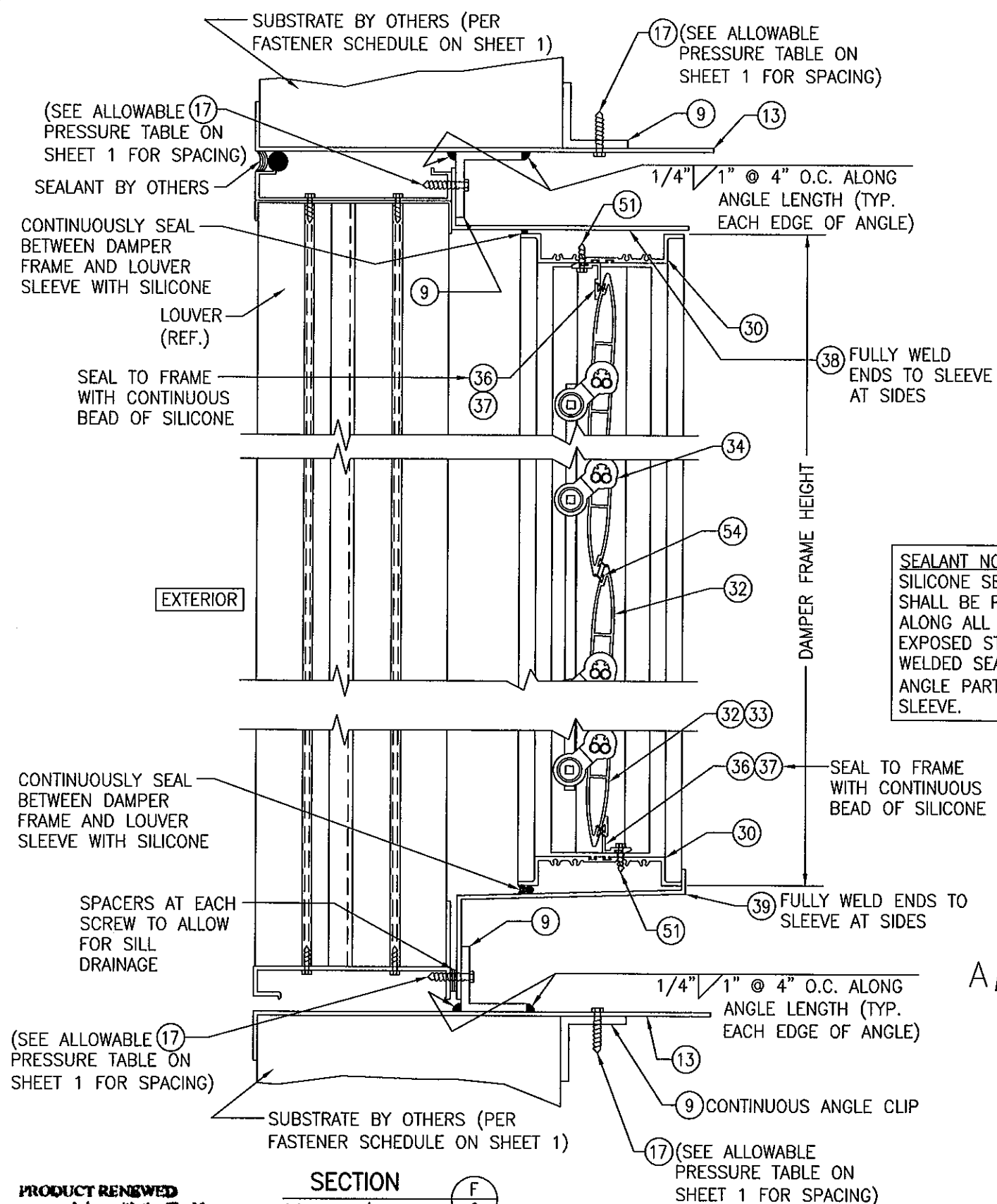
DAMPER CORNER CONSTRUCTION (AFD-20): HEAD AND SILL ARE BUTTED TO
THE SIDE JAMBS, SECURED WITH 4 NO. 7 X 1" SELF TAPPING 410 S.S.
SCREWS AND SEALED WITH SEALANT.

SLEEVE CORNER CONSTRUCTION: SIDE MEMBERS ARE JOINED & FULLY WELDED
TO HEAD & SILL MEMBERS

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 12-0312.02
Expiration Date 23/15/2017
By *[Signature]*
Miami Dade Product Control

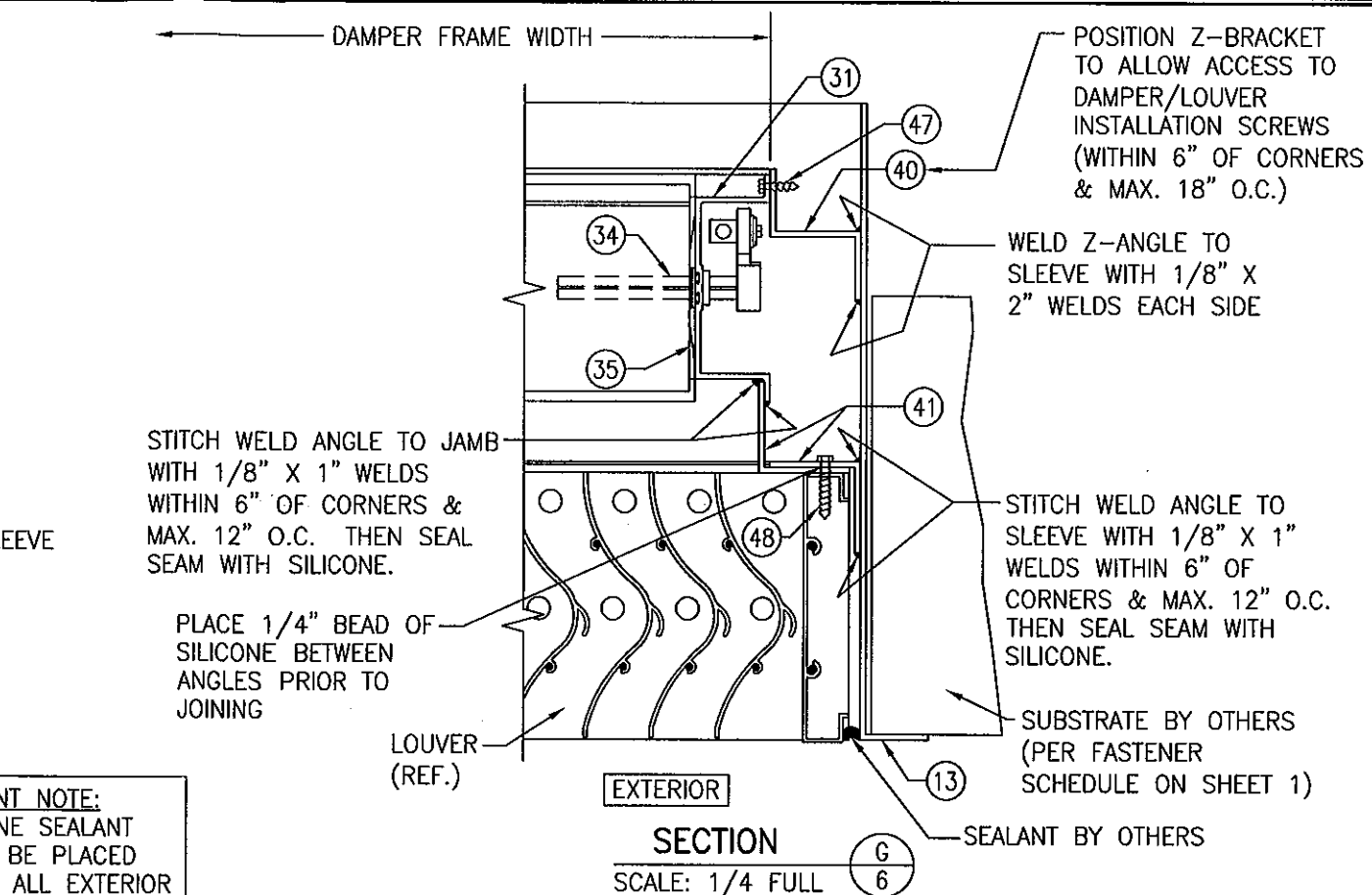


DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 10/18/08	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE LE-68 VERTICAL LOUVER SYSTEM			
MANUFACTURER AMERICAN WARMING & VENTILATING 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
PROFESSIONAL ENGINEER WARREN W. SCHAEFER LICENSE NO. 44135 STATE OF FLORIDA NOV 07 2011		DRAWING NO. 1503 SHEET NO. 5 OF 9	



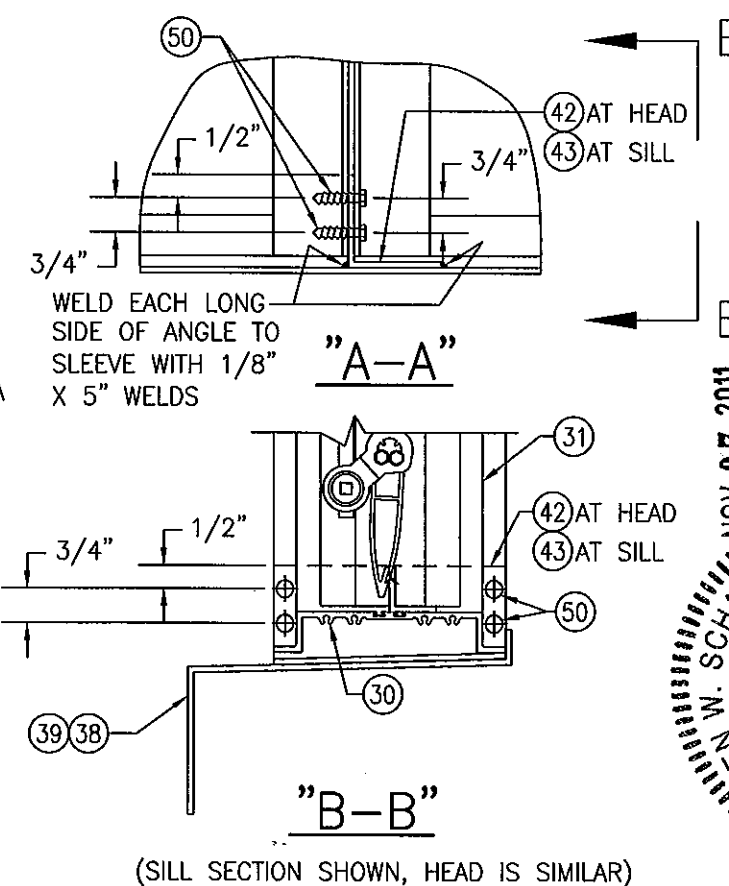
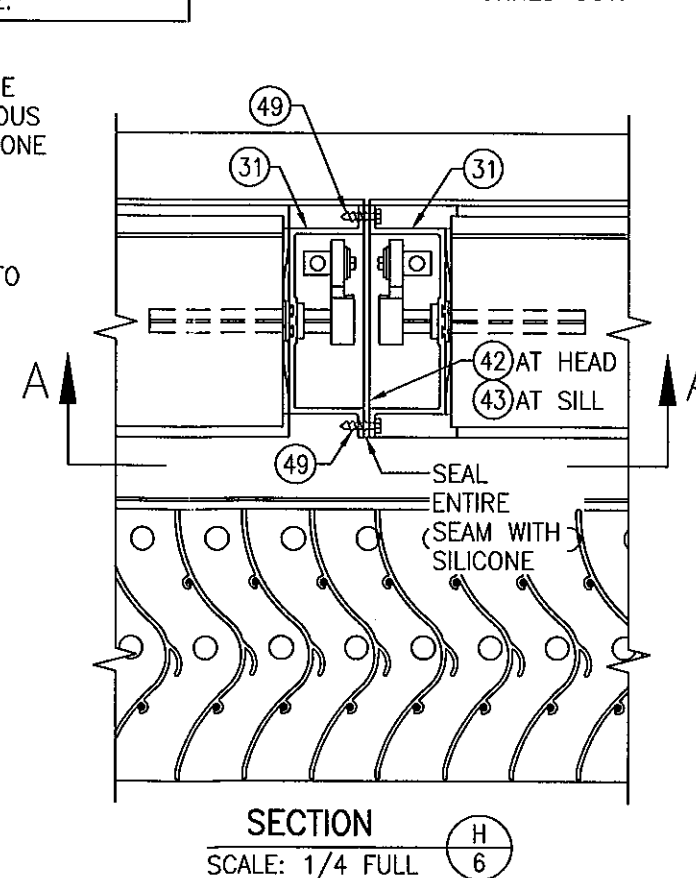
PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 12-0312-02
Expiration Date 03/15/2017
By [Signature]
Miami Trade Product Control

SECTION F
6
SCALE: 1/4" = 1' FULL



SEALANT NOTE:
SILICONE SEALANT
SHALL BE PLACED
ALONG ALL EXTERIOR
EXPOSED STITCH
WELDED SEAMS JOINING
ANGLE PART #9 TO
SLEEVE.

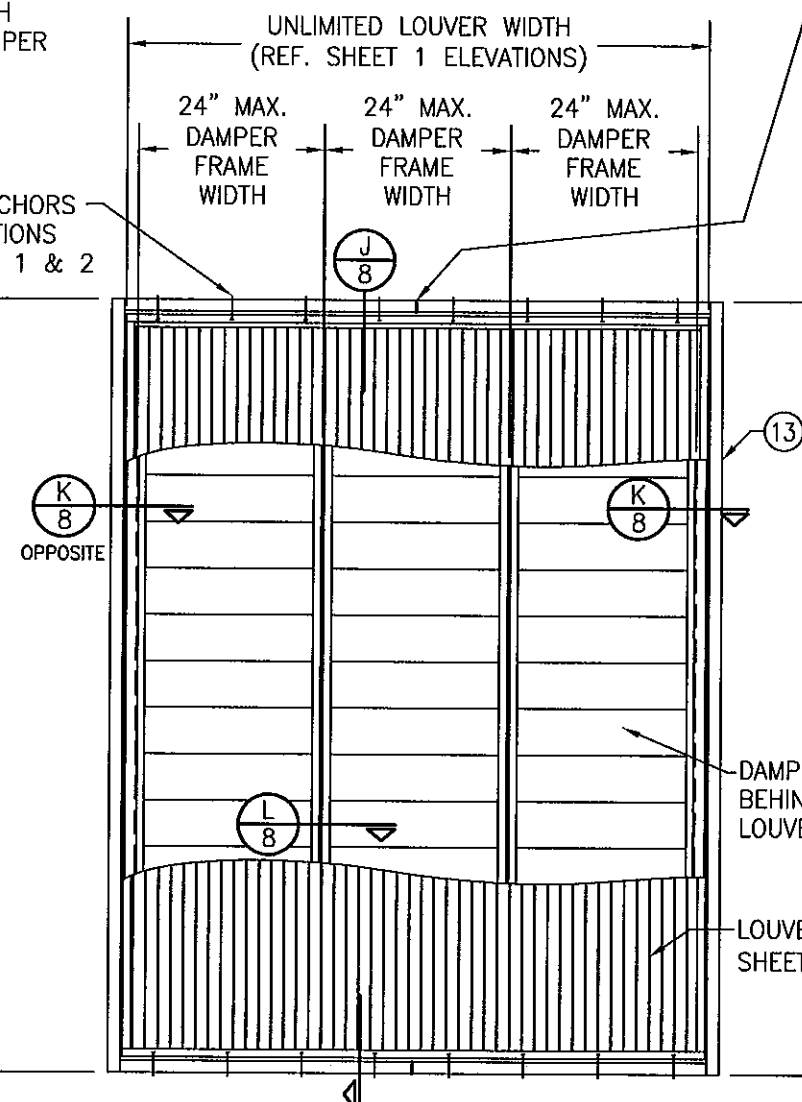
NOTE: Z-BRACKET PART #40 AND DAMPER SUPPORT
ANGLE PART #41 MAY BE TURNED IN AS SHOWN OR
TURNED OUT.

[illegible]

CAN WARMING & VENTILATING
101 INTERNATIONAL DRIVE
HOLLAND, OHIO 43528
419-865-5000

FILE
E-68 VERTICAL LOUVER SYSTEM

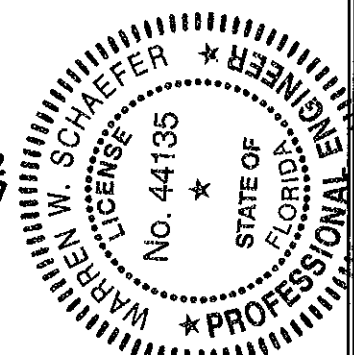
CONSULTANTS
**W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A. (CA 6809)**
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

[illegible][illegible]

- 1) NON-ARCHITECTURAL LOUVERS SHOWN. ARCHITECTURAL LOUVERS ALSO APPLY.
- 2) MORE THAN 1 DAMPER MAY BE PLACED BEHIND EACH LOUVER PANEL.
- 3) DAMPER MULLIONS/SEAMS DO NOT HAVE TO ALIGN WITH LOUVER PANEL SEAMS.
- 4) EACH INDIVIDUAL DAMPER PANEL IS LIMITED TO A 24" FRAME WIDTH.

ALLOWABLE DESIGN PRESSURE (AC-525/526 DAMPERS)
+150/-150 PSF

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 12-0312.02
Expiration Date 03/15/2017
By [Signature]
Miami Dade Product Control

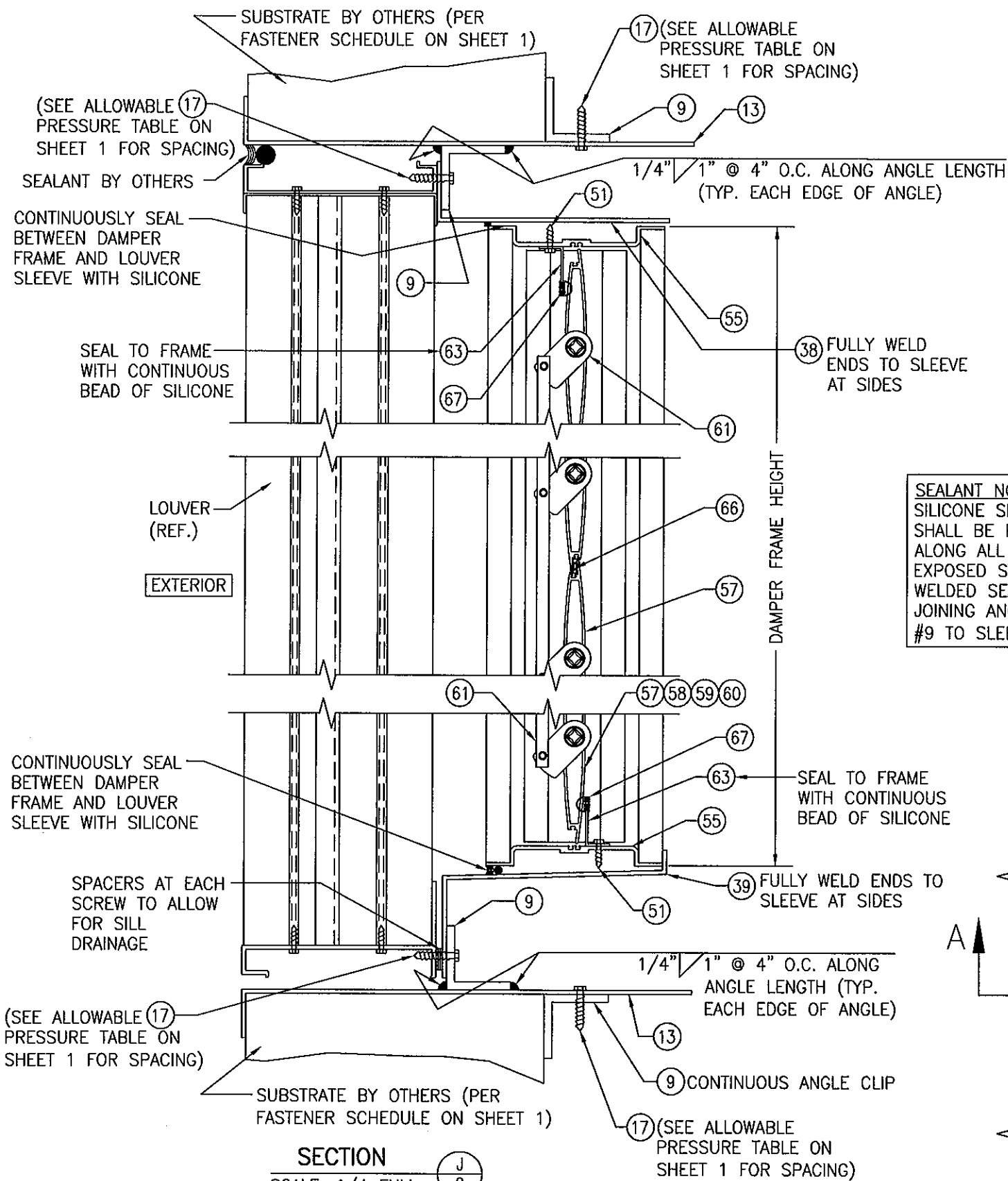


FACTURER
AMERICAN WARMING & VENTILATING
7301 INTERNATIONAL DRIVE
HOLLAND, OHIO 43528
419-865-5000

CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

~~WARREN W. SCHAEFER, P.E.
P.E. NO. 44135~~

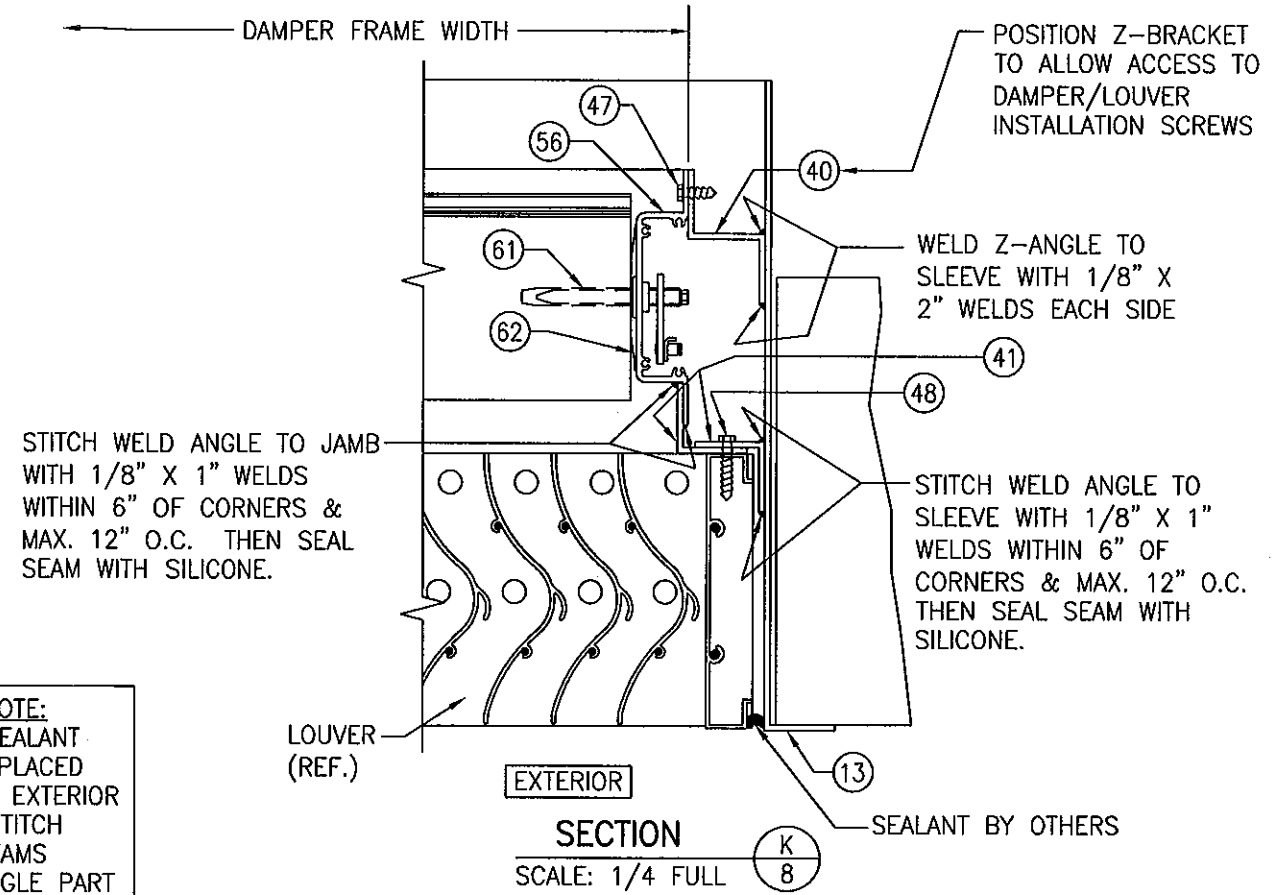
DRAWING NO. 1503	REV. B
SHEET NO. 7 OF 9	



SECTION J
SCALE: 1/4 FULL

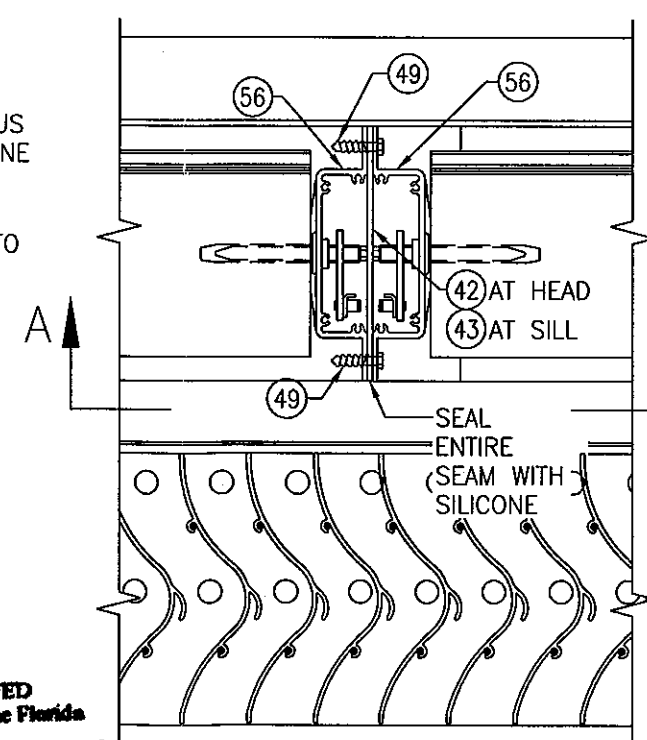
SEALANT NOTE:
SILICONE SEALANT SHALL BE PLACED ALONG ALL EXTERIOR EXPOSED STITCH WELDED SEAMS JOINING ANGLE PART #9 TO SLEEVE.

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 12-0312.02
Expiration Date 03/15/2017
By *[Signature]*
Miami Dade Product Control

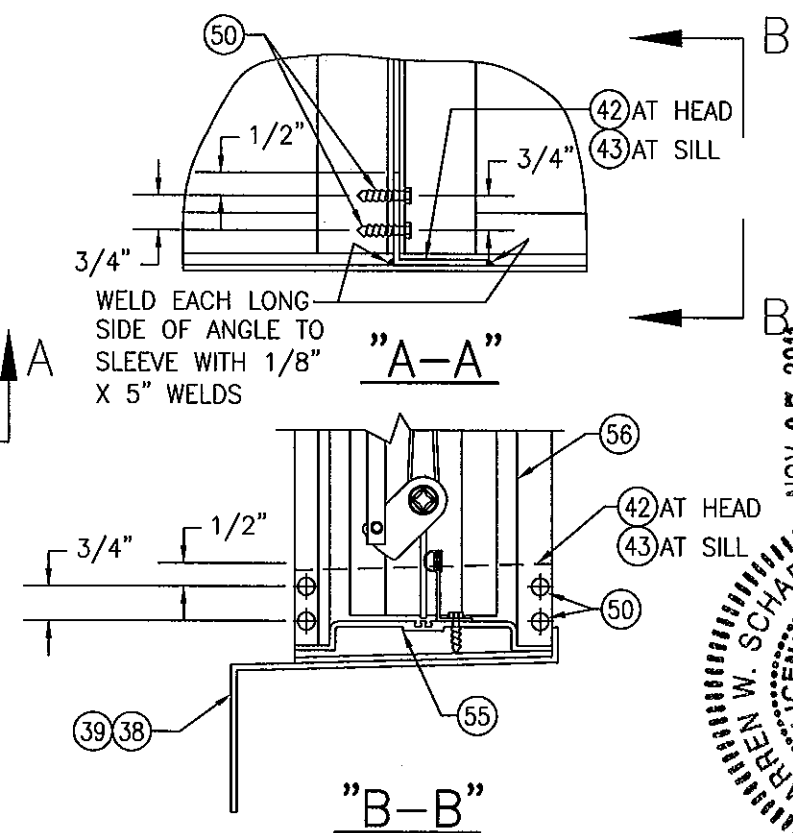


SECTION K
SCALE: 1/4 FULL

NOTE: Z-BRACKET PART #40 AND DAMPER SUPPORT ANGLE PART #41 MAY BE TURNED IN AS SHOWN OR TURNED OUT.



SECTION L
SCALE: 1/4 FULL



(SILL SECTION SHOWN, HEAD IS SIMILAR)

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 10/18/08	
NO.	REVISION DESCRIPTION	DATE	BY

LE-68 VERTICAL LOUVER SYSTEM

MANUFACTURER
AMERICAN WARMING & VENTILATING
7301 INTERNATIONAL DRIVE
HOLLAND, OHIO 43528
419-865-5000

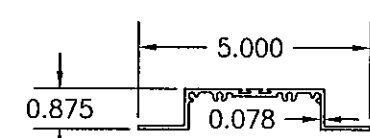
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

DRAWING TITLE
LE-68 VERTICAL LOUVER SYSTEM

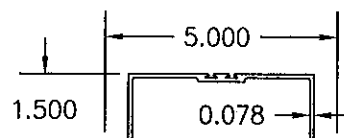
DATE
NOV 07 2011

STATE OF FLORIDA
WARREN W. SCHAEFER
LICENSE NO. 1503
P.E.

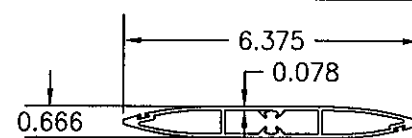
SHEET NO.
8 OF **9**



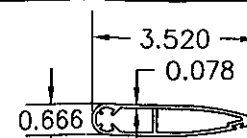
30 HEAD & SILL FRAME
(USED WITH AFD-20 SYSTEM)



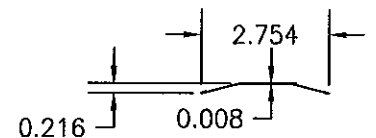
31 JAMB
(USED WITH AFD-20 SYSTEM)



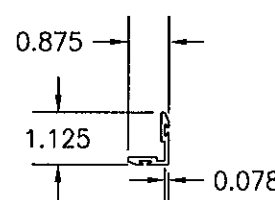
③2 BLADE
(USED WITH AFD-20 SYSTEM)



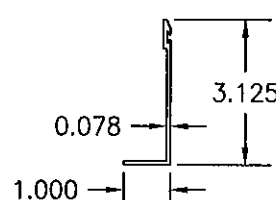
③③ HALF-BLADE
(USED WITH AFD-20 SYSTEM)



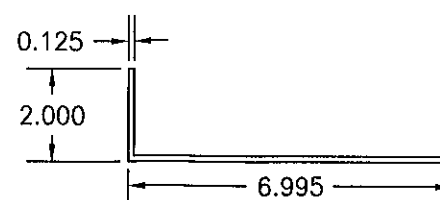
③⑤ JAMB SEAL
(USED WITH AFD-20 SYSTEM)



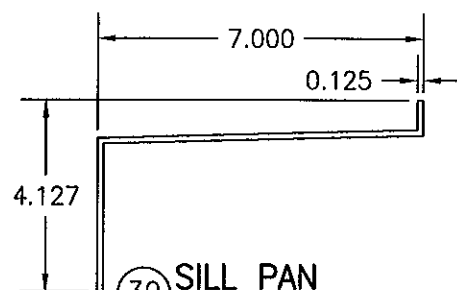
36 BLADE STOP
(USED WITH AFD-20 SYSTEM)



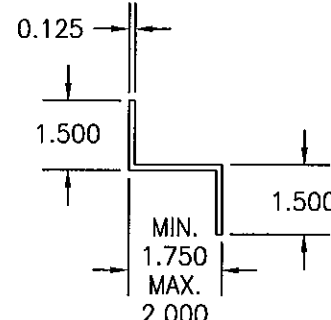
37 BLADE STOP (OPTIONAL)
(USED WITH AFD-20 SYSTEM)



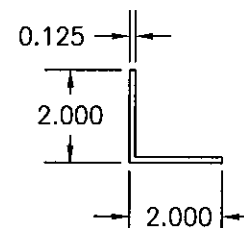
③8 HEAD PAN
(USED WITH AFD-20 &
AC-525/526 SYSTEMS)



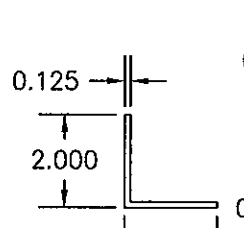
39 SILL PAN
(USED WITH AFD-20 &
AC-525/526 SYSTEMS)



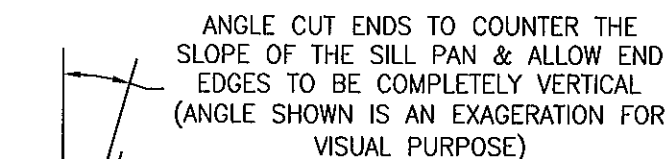
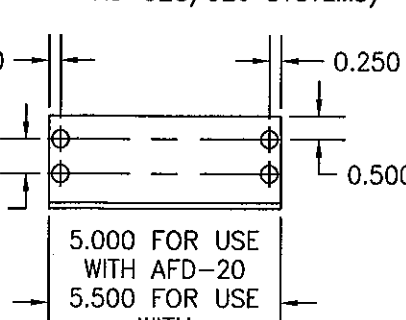
LENGTH = 3"
 (40) Z-BRACKET
 (USED WITH AFD-20 &
 AC-525/526 SYSTEMS)



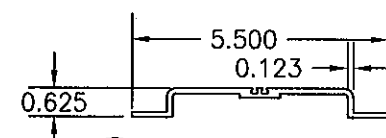
**41 CONTINUOUS
SUPPORT ANGLE**
(USED WITH AFD-20 &
AC-525/526 SYSTEMS)



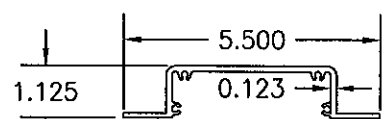
④2 MULLION END CLIP AT HEAD
(USED WITH AFD-20 &
AC-525/526 SYSTEMS)



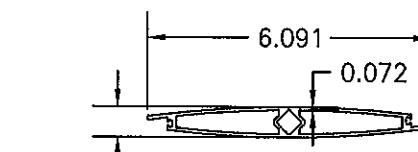
43 MULLION END CLIP AT SILL
(USED WITH AFD-20 & AC-525/526 SYSTEMS)



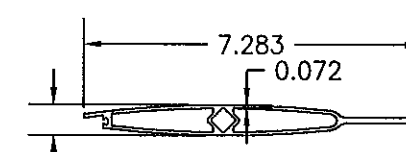
55 HEAD & SILL
(USED WITH AC-525/526 SYSTEM)



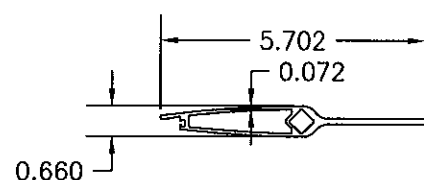
56 JAMB
(USED WITH AC-525/526 SYSTEM)



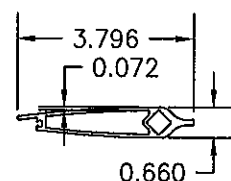
57 BLADE
(USED WITH AC-525/526 SYSTEM)



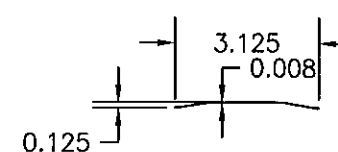
58 BLADE (OPTIONAL AT SILL)
(USED WITH AC-525/526 SYSTEM)



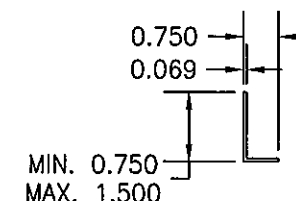
59 BLADE (OPTIONAL AT SILL)
(USED WITH AC-525/526 SYSTEM)



60 BLADE (OPTIONAL AT SILL)
(USED WITH AC-525/526 SYSTEM)



62 JAMB SEAL
(USED WITH AC-525/526 SYSTEM)

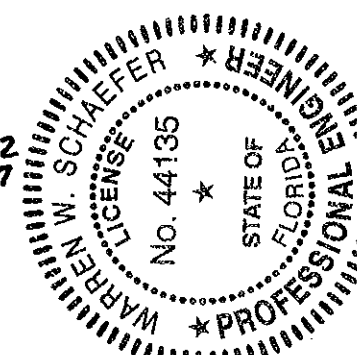


⑥3 BLADE STOP
(USED WITH AC-525/526 SYSTEM)

AFD-20 DAMPER (ALL PARTS BY ARROW UNITED INDUSTRIES)		
ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
30	HEAD & SILL FRAME	6063-T5 ALUMINUM
31	JAMB	6063-T6 ALUMINUM
32	BLADE	6063-T5 ALUMINUM
33	HALF-BLADE	6063-T5 ALUMINUM
34	BLADE LINKAGE ASSEMBLY	BY AWW
35	JAMB SEAL	304 STAINLESS STEEL
36	BLADE STOP	6063-T5 ALUMINUM
37	BLADE STOP (OPTIONAL)	6063-T5 ALUMINUM
38	HEAD PAN	5052-H32 ALUMINUM
39	SILL PAN	5052-H32 ALUMINUM
40	Z-BRACKET	5052-H32 ALUMINUM
41	CONTINUOUS SUPPORT ANGLE	6063-T5 ALUMINUM
42	MULLION END CLIP AT HEAD	6063-T5 ALUMINUM
43	MULLION END CLIP AT SILL	6063-T5 ALUMINUM
MISC. FASTENERS		
47	NO. 8 X 3/4" 18-8 SS SMS SCREW	2 PER Z-BRACKET
48	1/4" X 1" 410 S.S. SELF TAPPING SCREW	WITHIN 6" OF ENDS & MAX. 12" O.C.
49	NO. 8 X 3/4" 18-8 SS SMS SCREW	WITHIN 6" OF ENDS & MAX. 12" O.C.
50	1/4" X 1" 410 S.S. SELF TAPPING SCREW	4 PER MULLION END CLIP
51	NO. 8 X 3/4" 18-8 SS SMS SCREW	WITHIN 2" OF CORNERS & MAX. 12" O.C.
SEALS & SEALANTS		
54	BLADE SEAL	SOLID SILICONE

AC-525/526 DAMPER (ALL PARTS BY AIR BALANCE, INC.)		
ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
55	HEAD & SILL FRAME	6063-T5 ALUMINUM
56	JAMB	6063-T6 ALUMINUM
57	BLADE	6063-T5 ALUMINUM
58	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
59	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
60	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
61	BLADE LINKAGE ASSEMBLY	BY AWV
62	JAMB SEAL	304 STAINLESS STEEL
63	BLADE STOP	6063-T5 ALUMINUM
SEALS & SEALANTS		
66	BLADE SEAL	SANTOPRENE
67	BULB SEAL	VINYL

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 12-0312.02
Expiration Date 03/15/2017
By [Signature]
Miami Dade Product Control



DRAWING NO. 1503	REV. B
SHEET NO.	
CERTIFICATION NOV 07 2011 WARREN W. SCHAEFER P.E. P.E. NO. 44135	
DRAWING TITLE LE-68 VERTICAL LOUVER SYSTEM	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
MANUFACTURER AMERICAN WARMING & VENTILATING 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000	
DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 10/18/06
REVISION DESCRIPTION	BY DATE
No.	